Chapin on the Classification of the Weaver-Birds. 1— This notable paper is another result of Mr. Chapin's studies while a member of the American Museum's Congo Expedition, 1909-1915. The weaver-birds constitute the commonest family of African birds and no less than eightytwo forms were collected by the expedition so that Mr. Chapin had abundant opportunity to study them. He was early impressed by the similarity in nesting habits in species usually arranged in different sub-families, and subsequently a study of the curious markings within the mouths of the young, pointed to like relationships. A thorough study of the family after his return convinced him that the extent of development of the tenth primary which had generally been used as a sole criterion for the separation of the two subfamilies 'Ploceinæ' and 'Estrildinæ' was not a reliable character, when it failed to accord with those above mentioned, while the association of all the long-tailed species of the family was not a natural arrangement as some of them were obviously true 'weavers' (Ploceinæ) and not 'weaver-finches' (Estrildinæ). This latter fact had long been suspected by the reviewer and doubtless by others.

Mr. Chapin's investigations however did not stop here and in studying the relationships of the outlying genera he discovered that *Textor* possesses such striking structural peculiarities that it must be regarded as constituting a distinct family, *Dinemillia* and perhaps some other genera being probably associated with it. The skull of *Textor* differs from those of all other weavers examined in having the fenestræ associated with the orbital foramina different in form and number, and in the presence of an oblique ascending median bar. The sternum however exhibits the most remarkable peculiarity, as pointed out to the author by Mr. W. DeW. Miller, in the presence of a *spina interna*, the first recorded occurrence of this process in any passerine bird.

Parmoptila a genus which has been shifted about from the Sylviidæ to the Dicæidæ and Paridæ was suspected of being a weaver-finch by Mr. Chapin, and a subsequent examination of the young discovered the curious mouth markings almost as in Nigrita, while the character of the nest as described by Bates agrees with those of the weaver-finches.

Philetairus in all its structural features is apparently a finch and has been so considered by some authors, but its remarkable nest is so unlike those of the finches and so distinctly Ploceine, that Mr. Chapin prefers to keep it among the Weavers in spite of the extreme reduction in the tenth primary. We find all gradations in the size of this feather among the weavers and Philetairus may well be regarded as the culmination of the series, being the only genus to have reached the 'nine primaried' condition which is normal in the Fringillidæ.

Mr. Chapin's final arrangement differs from those of recent authors in the recognition of a distinct family, Textoridæ, for *Textor* and *Dinemellia*;

¹The Classification of the Weaver-Birds. By James P. Chapin. Bull. Amer. Mus. Nat. Hist., Vol. XXXVII, Art. IX, pp. 243-280. May 8, 1917.

in the rejection of the 'Viduinæ' either as a subfamily or a group and in the transference of Spermospiza from the Ploceinæ to the Estrildinæ (= Spermestinæ) and of Quelea, Pyromelana, Euplectes, Urobrachya, Coliuspasser, Diatropura, Drepanoplectes, and Pseudonigrita from the latter to the former. Parmoptila and Pholidornis are added to the Estrildinæ while Philetairus and Anomalospiza are retained in the same group.

An appendix contains brief accounts of the nest and eggs, and size of the outer primary in each genus, and in the Estrildinæ the mouth markings of the young as well. These are based upon Mr. Chapin's personal observations and the published accounts of others. A number of half-tone plates showing photographs of nests and drawings of the mouths of young birds complete this valuable paper which is one of the most important contributions to avian taxonomy that has appeared in America for some time.—W. S.

Pearson's 'The Bird Study Book.' — Realizing from his own wide experience the many questions that beginners in bird study are constantly asking of those who are more advanced in the subject, Mr. Pearson conceived the idea of embodying in book form such information as would serve as answers to these queries, and the work before us represents the result of his efforts. He begins with general instructions as to the best ways to become familiar with wild birds, following with a discussion of the structure of birds' nests, their variability and where to look for them, and then an account of the domestic life of birds. The migration of birds and birds in winter very properly form the subjects of two separate chapters, as these are perhaps the two most popular topics in outdoor bird study.

All of this naturally leads up to that phase of the subject with which Mr. Pearson is especially identified—the protection of birds, to which all students of outdoor life will sooner or later be attracted. Chapters on the economic value of birds; the bird supply; the traffic in feathers; bird protective laws; bird reservations; bird sanctuaries and the teaching of bird study follow in natural order.

The work is admittedly intended primarily for the beginner, and the author seems to have been most happy in the character of the information which he has collected and in the manner of its presentation. 'The Bird Study Book' will give just the information that many persons are seeking, while the later chapters will give many more or less advanced field students an intelligent idea of the problem of bird protection and what has been accomplished towards its solution, thereby forestalling much well intended but misdirected effort.

Mr. Pearson has included many original incidents and ideas in his

¹ The Bird Study Book. By T. Gilbert Pearson, Secretary, National Association of Audubon Societies. Colored Frontispiece. Pen and Ink Drawings by Will Simmons and sixteen Photographs. Doubleday, Page & Company, Garden City, New York. 1917. 8vo, pp. i-xv, 1-258. Price \$1.25 net.